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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,735	09/28/2001	Shuya Ogi	N36-135856M/TH	2177
30743	7590	10/18/2004	EXAMINER	
WHITHAM, CURTIS & CHRISTOFFERSON, P.C. 11491 SUNSET HILLS ROAD SUITE 340 RESTON, VA 20190			STULTZ, JESSICA T	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,735	OGI ET AL.	
	Examiner	Art Unit	
	Jessica T Stultz	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 and 36-41 is/are allowed.
- 6) ☒ Claim(s) 26-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26, 29-31, and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Murano et al Japanese document number 06-252450.

Regarding claim 26, Murano et al discloses a rod lens array comprises rod lenses and that the rod lenses can have a center-line average roughness between 0.5 μm - 2.0 μm on the peripheral surface of the (Abstract and Section 14, wherein the average surface roughness of front face “16” of lens “4”, ranges between 0.5-5 μm , and wherein lens “4” is part of lens array “2”, Figures 2 and 3), but does not specifically disclose that the values for the center-line-average roughness on the peripheral surfaces are between 0.5 μm - 2.0 μm as averaged for the whole lens array. However, it is inherent from Murano et al that the values for the center-line-average roughness on the peripheral surfaces are between 0.5 μm - 2.0 μm as averaged for the whole lens array, this being reasonably based upon one of the rod lenses being disclosed as having an average roughness on its peripheral surface falling in this range and the drawings which show that all of the rod lenses have similar structure (Abstract and Section 14, wherein the average surface roughness of front face “16” of lens “4”, ranges between 0.5-5 μm , and wherein lens “4” is part of lens array “2”, Figures 2 and 3).

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Regarding claim 29, it is inherent from Murano et al that the rod lens array disclosed above would further include the representative values for the center-line average roughness be a value on a straight line that extends on the peripheral surface of the lens parallel to its axis, this being reasonably based upon the description of the average surface roughness of the face "16" and Figure 2 (Section 14).

Regarding claim 30, it is inherent from Murano et al that the rod lens array disclosed above would further include the representative values for the center-line average roughness are each the average of values on different straight lines that extend on the peripheral surface of the lens along its axis, this being reasonably based upon the similarity in structure between the drawings of the reference and the claimed invention and since values can be taken along different straight lines across the rod and then averaged to obtain an accurate representation of the entire rod (Figures 2 and 3).

Regarding claim 31, Murano et al further discloses a rod lens array as disclosed above wherein each of the rod lenses have a center-line average roughness of $0.5\text{ }\mu\text{m}$ - $2.0\text{ }\mu\text{m}$ on the peripheral surface (Abstract and Section 14, wherein the average surface roughness of front face "16" of lens "4", ranges between $0.5\text{ }\mu\text{m}$ - $5\text{ }\mu\text{m}$, and wherein lenses "4" are part of lens array "2", Figures 2 and 3).

Regarding claim 34, Murano et al further discloses a rod lens array wherein a resin portion that is integral with the constituent rod lenses fills the gap between adjacent rod lenses and surrounds all rod lenses (Section 15, wherein the lens "4" is covered with resin "18", Figure 3).

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Regarding claim 35, Murano et al further discloses a rod lens array wherein a frame is fixed to at least one of two opposite surfaces of the resin portion such that the frame is parallel with the rod lenses (Section 12, wherein the frame comprises side plate "6" and frame "8", which are parallel to the rod lenses "4", Figure 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-28 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murano et al.

Regarding claims 27-28 and 32-33, it would have been obvious from Murano et al that the rod lens array comprise center-line-average roughness of the peripheral surfaces of constituent rod lenses have a standard deviation between 0.01 μm to 0.2 μm and the diameters of the rod lenses have a standard deviation between 0.01 μm to 2.5 μm for the whole lens array since Murano et al discloses a rod lens array including at least one rod lens having a center-line average roughness of 0.5 μm - 2.0 μm on the peripheral surface and a diameter of 1.1mm, wherein the lens rods are very similar in structure (Abstract and Sections 14, wherein the average surface roughness of front face "16" of lens "4", ranges between 0.5-5 μm , and wherein lens "4" is part of lens array "2" and the diameter of lens "4" is 1.1 mm, Figures 2 and 3), therefore the standard deviation between the lens rods should be very small since it is well known in the art of statistical data collection for the standard deviation of values to be small when the lenses are very

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similar in structure (Figure 3). Therefore it would have been obvious for the rod lens array of Murano et al to further include the center-line-average roughness of the peripheral surfaces of constituent rod lenses have a standard deviation between 0.01 μm to 0.2 μm for the whole lens array since Murano et al discloses a rod lens array including at least one rod lens having a center-line average roughness of 0.5 μm - 2.0 μm on the peripheral surface wherein the lens rods are very similar in structure, therefore the standard deviation between the lens rods should be very small since it is well known in the art of statistical data collection for the standard deviation of values to be small when the lenses are very similar in structure.

Allowable Subject Matter

Claims 25 and 36-41 are allowed.

The following is an examiner's statement of reasons for allowable subject matter: none of the prior art alone or in combination disclose or teach of the claimed combination of limitations to warrant rejection under 35 USC 102 or 103.

Regarding claim independent claim 36, none of the prior art alone or in combination disclose or teach of a rod lens array as disclosed, specifically wherein a plurality of gradient index rod lenses are placed at an average spacing of 1 μm –5 μm .

Response to Arguments

Applicant's arguments, see Response, filed August 4, 2004, with respect to the rejection(s) of claim(s) 25-35 under USC 102/103 have been fully considered and are persuasive.

Applicant's arguments filed August 4, 2004 have been fully considered but they are not persuasive. Specifically, regarding claim 26, applicant does not specifically disclose how Murano et al does not disclose the limitations of claim 26, therefore the rejection remains.

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Regarding claims 27 and 28, applicant argues that Murano et al does not disclose “a set of dispersion of roughness or diameter in a predetermined range among the lenses in a lens array”, however this limitation is not included in the either of claims 27 and 28. If this limitation is intended to define the claims, it should be added into the claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

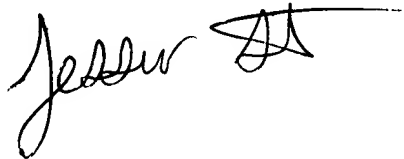
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jessica Stultz
Patent Examiner
AU 2873
October 13, 2004



JORDAN SCHWARTZ
PRIMARY EXAMINER